

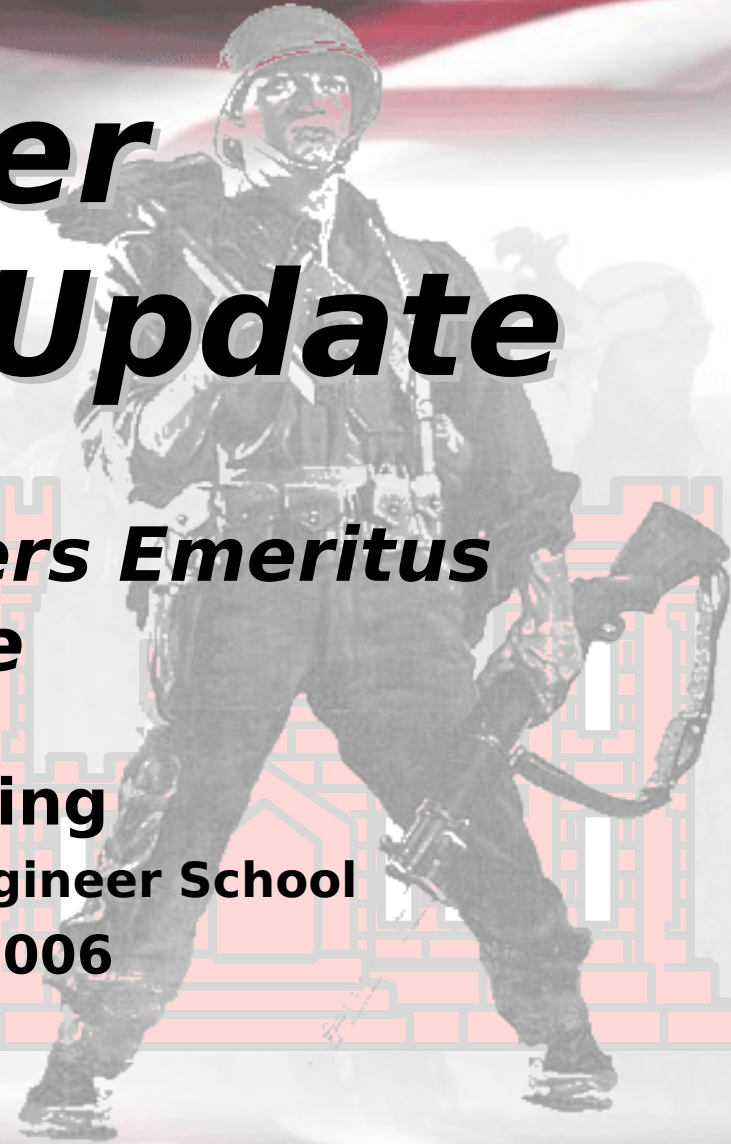
Engineer Regimental Update

***T³ Brief to 2006 Leaders Emeritus
Conference***

BG Jack Sterling

Commandant, US Army Engineer School

21 September 2006





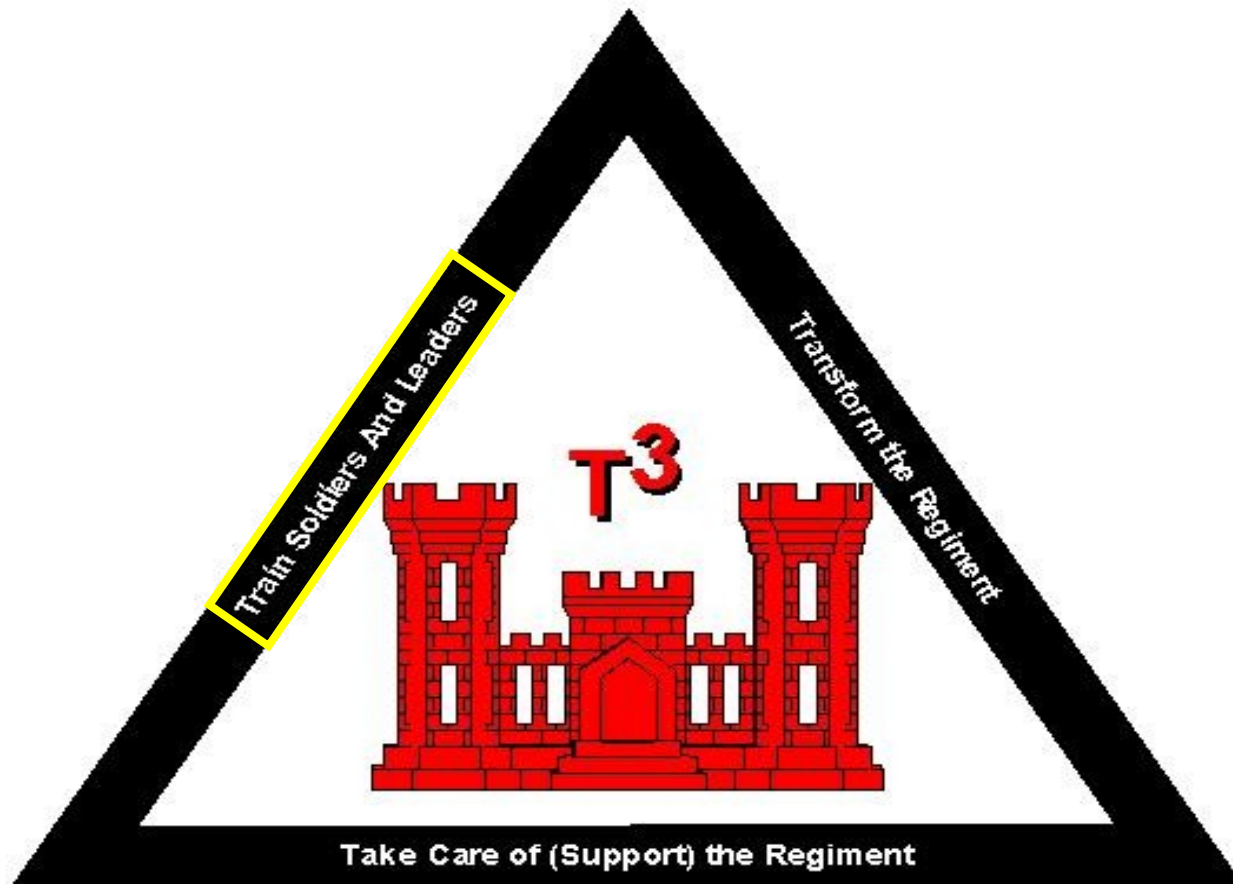
Agenda

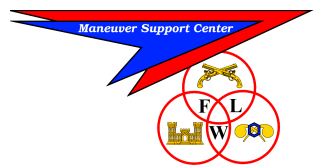


- **T**rain the Regiment
 - Revolution in IET
 - BOLC III
- **T**ransform the Regiment
 - Timeline
 - Status of Modularity
- **T**ake care of the Regiment
 - TRO
 - Support to OIF / OEF
 - POM \$10.5 billion Procurement



Train the Regiment





United States Army Maneuver Support Center

Fort Leonard Wood, Missouri



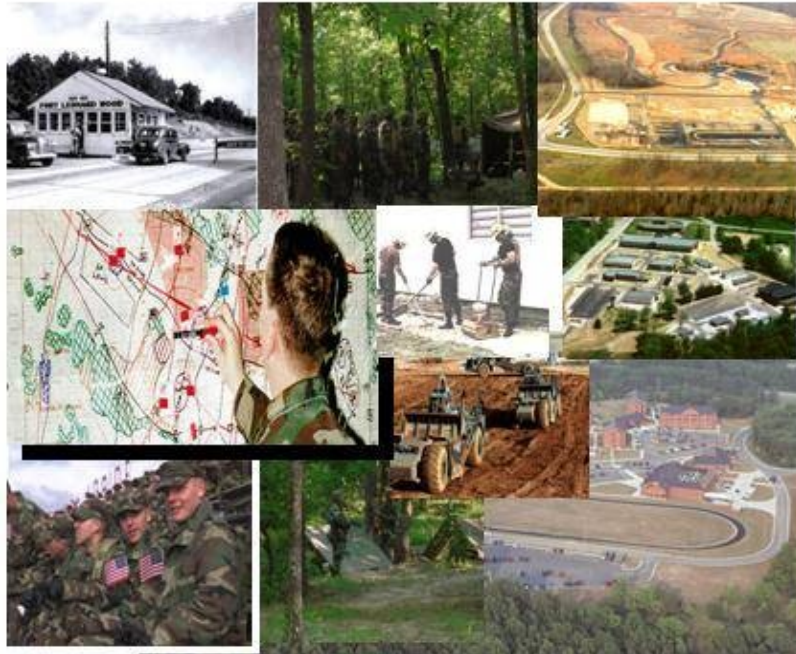
Pre-OIF

1. Primarily “force-on-force” focus (area security, mobility support, etc)
2. Geophysical focus on European and Southwest Asian terrain
3. Standard garrison training area maps, with features familiar to leaders
4. Primary focus on manufactured, threat explosives (mines, demolitions, etc)
5. Focus on the tactical and operational use of nuclear, biological and chemical weapons operations
6. Distinct strategic, operational, and tactical roles



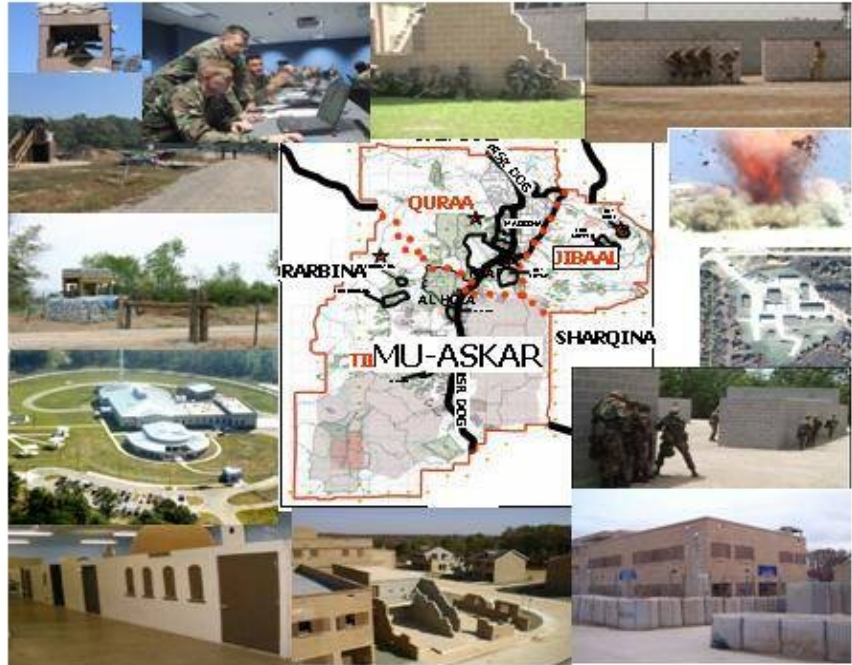
Now

1. “Assured Mobility” focus (convoy security, urban breaching, counterinsurgency operations, etc)
2. **Geophysical and geopolitical focus (terrain + culture) on Southwest Asian terrain**
3. **Modified garrison maps, with unfamiliar features like a “Green Zone” and Arabic-named villages**
4. **Balanced focus on conventional and improvised explosives**
5. **Additional focus on the terrorist use of weapons of mass destruction (detection, assessment, and sensitive site exploitation)**



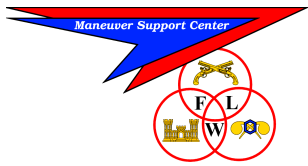
Pre-OIF

1. **Marksmanship trained primarily on standard ranges**
2. **One German-based MOUT site**
3. **One Forward Operating Base training site**
4. **One weapons simulator building, little Improvised Explosive Device (IED) training**
5. **Austere, homogeneous, training areas and sites (high-intensity focus)**



Now

1. **Two realistic six-mile convoy live fire ranges, five Iraqi shoot-houses**
2. **Eight MOUT Sites, including Iraqi village**
3. **Nine Forward Operating Area Base training sites**
4. **Eight, state-of-the-art marksmanship buildings, Counter Explosive Hazards Center with IED focus)**
5. **Multifaceted, complex training areas and sites (battle field debris, mine dog, humanitarian demining, convoy opns, etc)**



United States Army Maneuver Support Center

Fort Leonard Wood, Missouri



Pre - OIF

1. Graduating Soldiers Ready to Join a Unit
2. Garrison Oriented Training
3. Drill and Ceremonies
4. Passing APFT
5. Qualification on M16 Rifle
6. Soldierization and Army Values



Now

1. **Graduating Soldiers Ready to Win & Survive in Combat (39/9 WTBDs)**
2. **Field Oriented Training: Increased FOB and MOUT Training**
3. **Tactical Mvts and Cbt Drills; **Convoy Live Fire****
4. **Campaign Endurance, Cbt Fitness and Combatives**
5. **Employment of Weapons Found in Today's Units; Weapons Immersion; EST 2000**
6. **Warrior Ethos, Weapons Immersion, Warrior Tasks and Drills, Drill Sergeants as Squad Leaders; Positive Leadership (**8% Attrition**)**



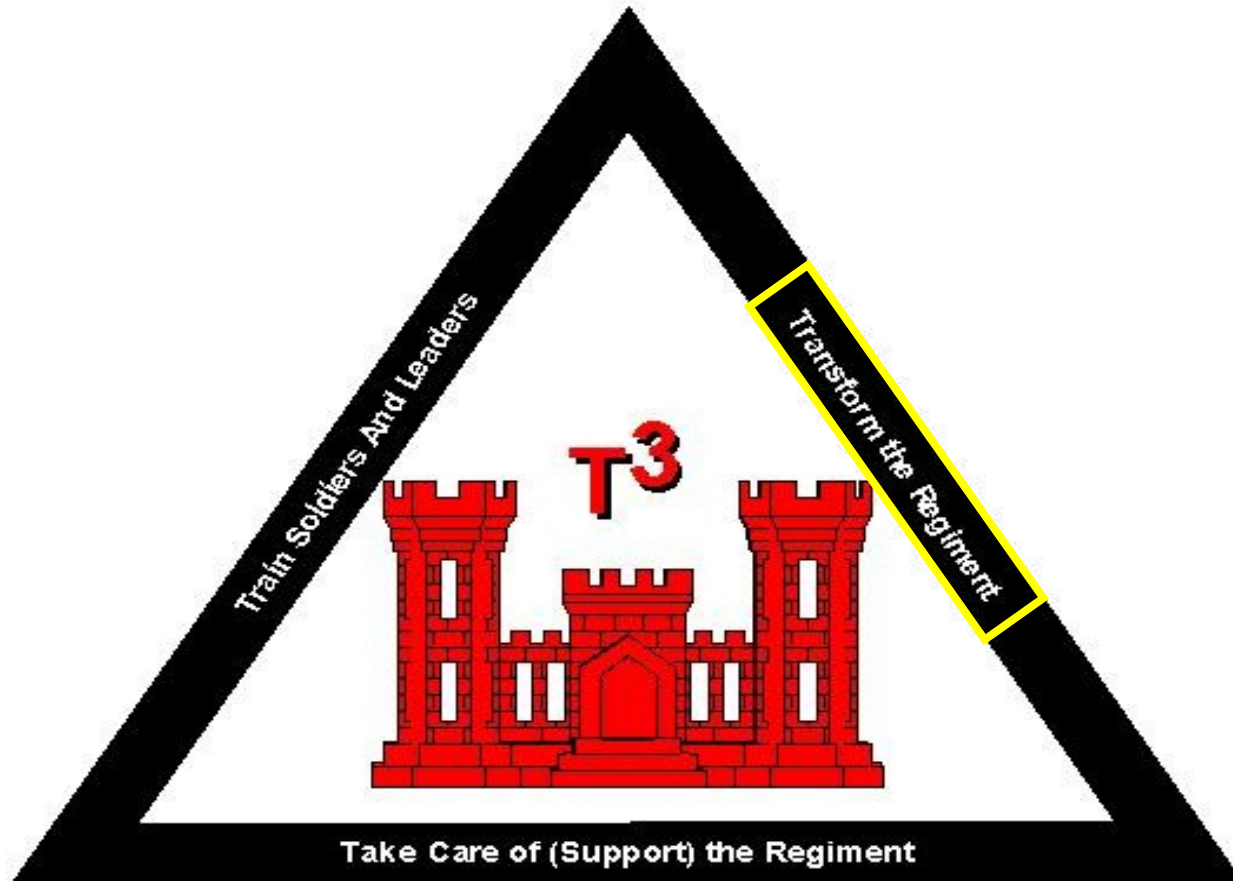
Engineer BOLC III



- Overview
 - 11-12 resident classes per year
 - 14 weeks in length
 - 5 days per week
 - 8 - 10 hours per day
 - Average class size: 65-70 officers
 - Approximately 750-800 engineer students per year
 - 15 students per class attend Sapper Leader Course after graduation
- Main Modules
 - Bridging
 - Demolitions
 - Assured Mobility
 - Task Force Engineer
 - Basic Construction
 - Tracked Training (Combat / Construction)
 - Capstone FTX
- BOLC Class 9-06 is USAES's first BOLC III Class
- Key change is that all Officer Basic Course Common Core Classes have moved to BOLC II at Forts Benning and Sill
- These classes include:
 - Army Training Philosophy; Training Management
 - Military Justice; Law of War; DoD Joint Ethics
 - Unit Movement Planning
 - NBC Warfare
 - Call for and Adjust Indirect Fire
 - Land Navigation
 - Range Operations

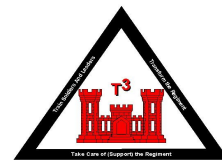


Transform the Regiment





Transformation Timeline



Unit	Location	Date
19 th EN BN	Knox	A-Oct 05
20 th EN BN	Hood	A-Oct 05
36 th EN BDE	Hood	C-Jun 06
1 st EN BN	Riley	C-Jun 06
94 th EN BN	FLW	C-Aug 06
4 th EN BN	Carson	A-Oct 06
7 th EN BN	Drum	A-Oct 06
326 th EN BN	Campbell	A-Oct 06
18 th EN BDE	Germany	C-Dec 06
11 th EN BN	Benning	A-Jan 07
5 th EN BN	FLW	C-May 07
14 th EN BN	Lewis	C-May 07
130 th EN BDE	Lewis	C-Jun 07
8 th EN BN	Hood	A-Jul 07

Unit	Location	Date
84 th EN BN	Hawaii	C-Oct 07
2 nd EN BN	Bliss	A-Oct 07
65 th EN BN	Hawaii	C-Oct 07
6 th EN BN	Alaska	A-Oct 08
10 th EN BN	Stewart	A-Oct 08
46 th EN BN	Polk	C-Oct 08
864 th EN BN	Lewis	C-Oct 08
92 nd EN BN	Stewart	C-Oct 08
20 th EN BDE	Bragg	C-Mar 09
62 nd EN BN	Hood	C-May 09
27 th EN BN	Bragg	C-Oct 09
37 th EN BN	Bragg	C-Oct 09

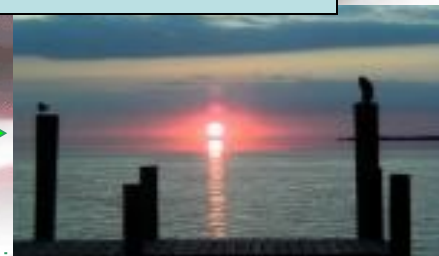
A - Activation
C - Conversion

Engineer Transformation Challenge

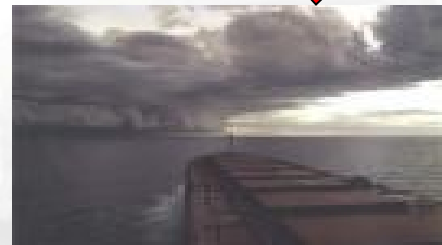


The Perfect Opportunity

**FUSION
CELL
Synchroniz
and
Modify**



**ENDSTATE:
Synchronization LEAD:
Engineer School**



GWOT SOURCING
(OIF / OEF)



BASING
(BRAC / IGPBS / Discretionary
Moves)



MODULARITY
(Convert 98 SRCs to 31 Modules)

EN BN Requirement

EN BN Relocation

**Modular EN BN
Conversion**

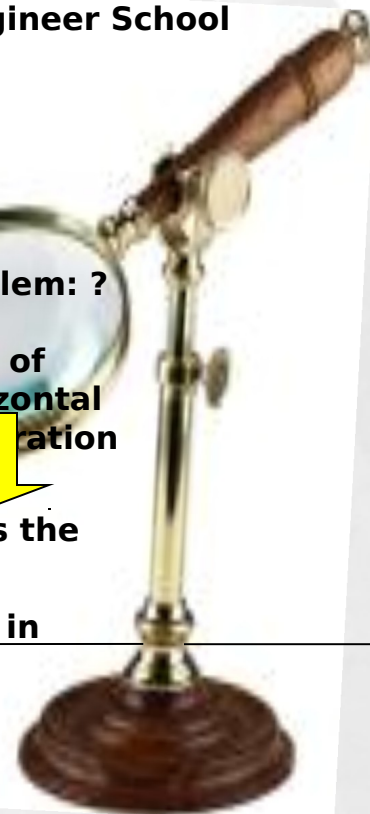
Pentagon OCE
↑
FORSCOM
↑
DA G3
↑
Joint Staff (EN)
↑
CENTCOM
↑
CFLCC
↑
MNC-I

BRAC Commission
↑
DA G3
↑
ACSIM
↑
IMA
↑
FORSCOM
↑
USAEUR
↑
EUSA

BCT Based Force
DIV EN BNs
BCT ENG
↑
DIV Based Force
No DIV EN BDEs
DIV ENG
↑
DIV Based Force
DIV EN BDEs
BDE CDR

**Problem: ?
? Lack of
Horizontal
Integration**

- What is the plan?
- Who is in charge?



**Reality in the
field**

94 EN BN
Redeploys and
Deploys same FY

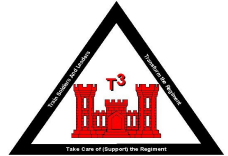
94 EN BN
Moves- OCONUS
to CONUS

94 EN BN
Converts to
BN HQ + 7 Modules

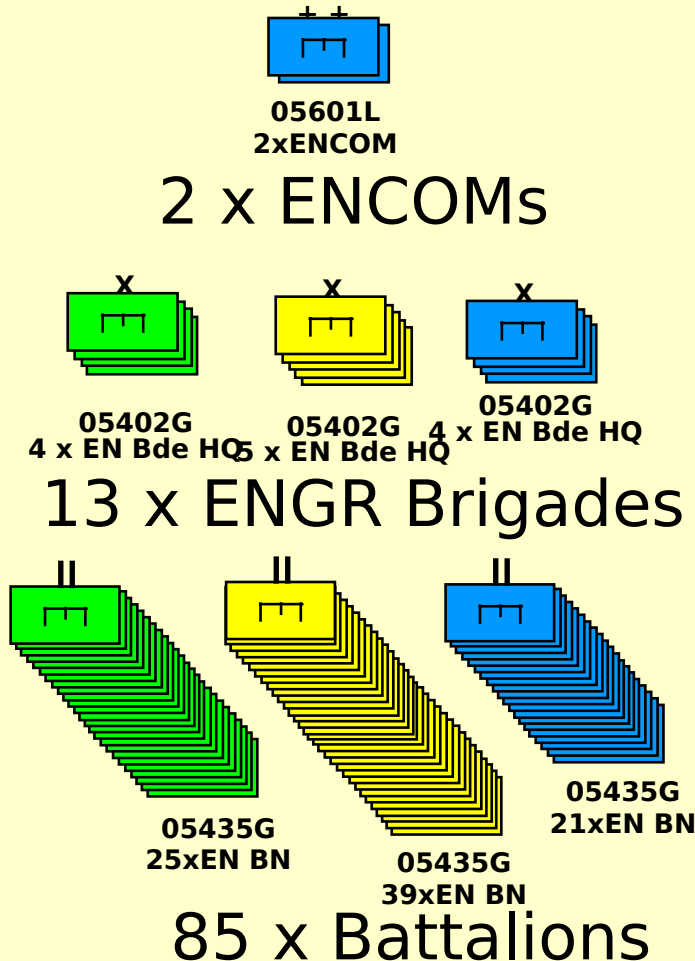


The Engineer Regiment - TAA

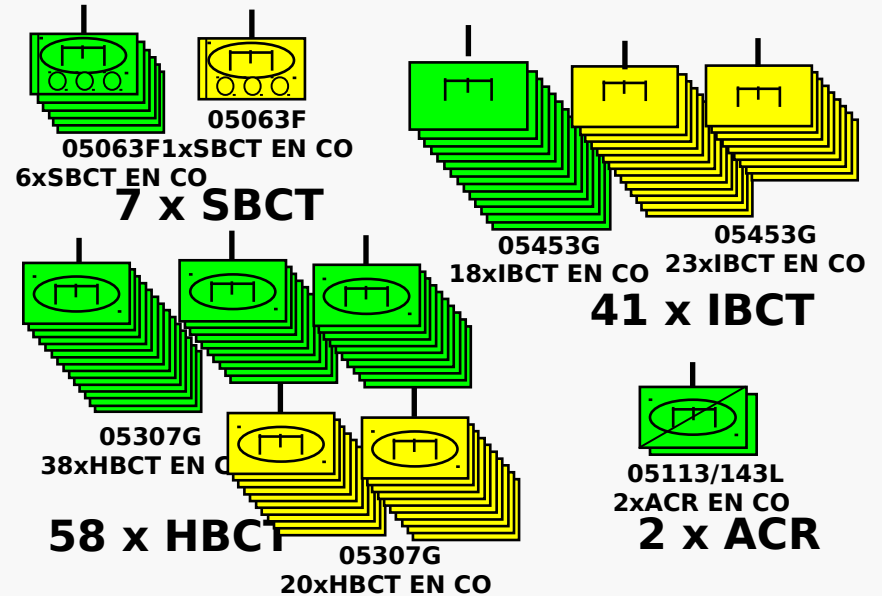
08-13



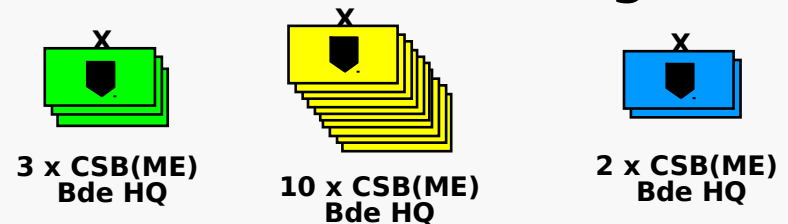
EAB EN Structure



Embedded EN Structure



15 x CSB(ME) Brigades

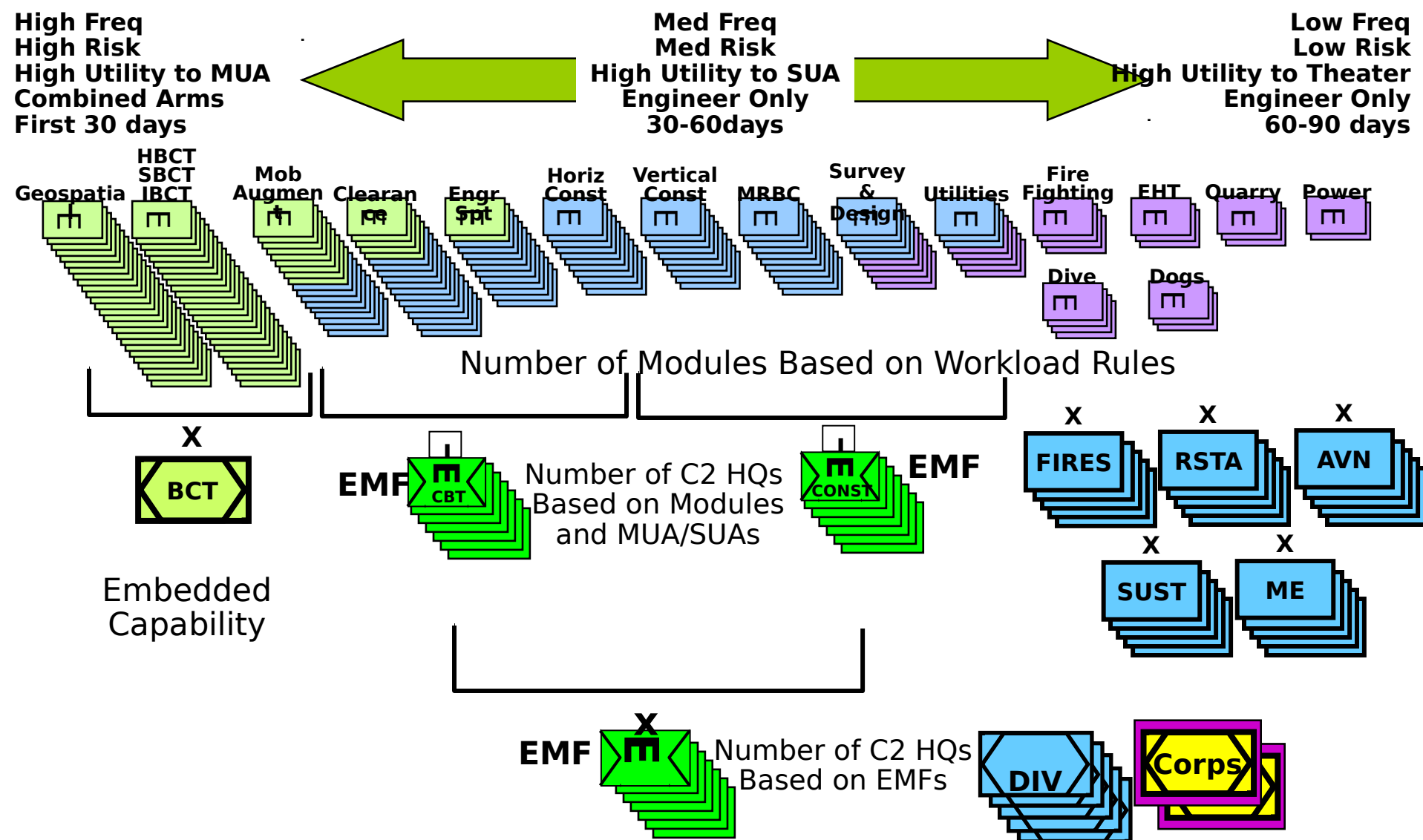


Key:



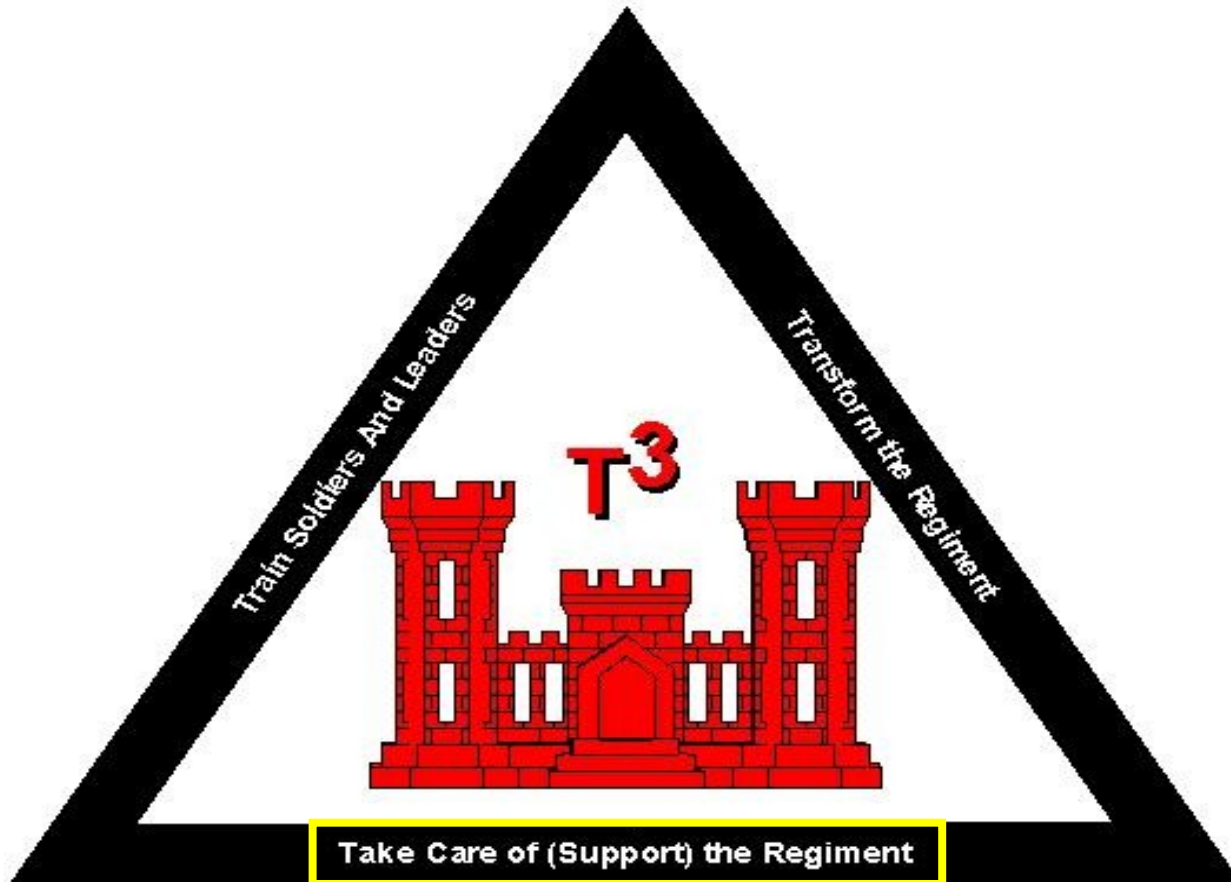


The Modular Engineer Force





Take Care of the Regiment





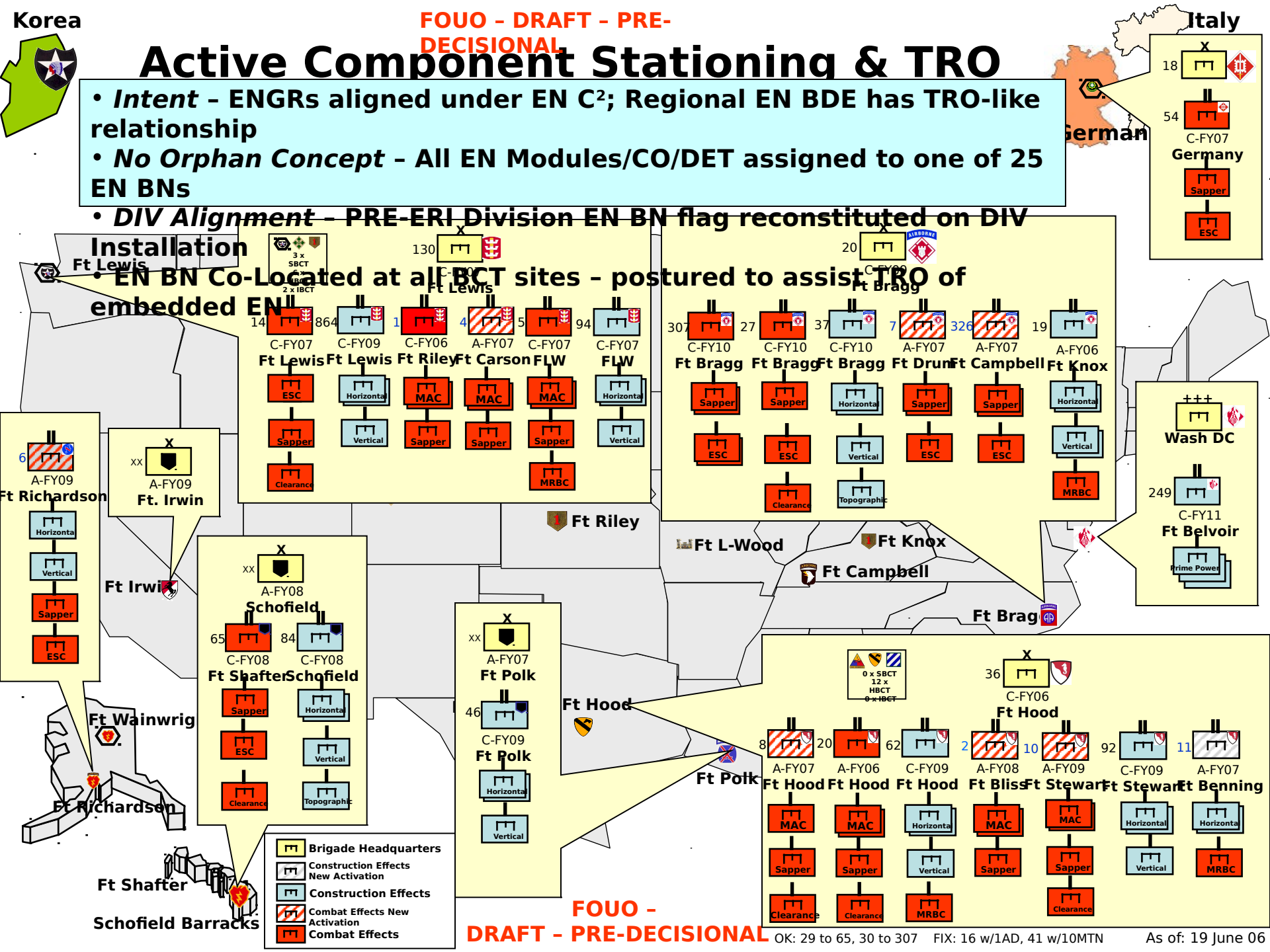
FOUO - DRAFT - PRE-DECISIONAL

Active Component Stationing & TRO

- **Intent** - ENGRs aligned under EN C²; Regional EN BDE has TRO-like relationship
- **No Orphan Concept** - All EN Modules/CO/DET assigned to one of 25 EN BNs

• **DIV Alignment** - PRE-ERI Division EN BN flag reconstituted on DIV

Installation
 • **EN BN Co-Located at all BCT sites - postured to assist TRO of embedded EN**



- Brigade Headquarters
- Construction Effects New Activation
- Construction Effects
- Combat Effects New Activation
- Combat Effects

FOUO - DRAFT - PRE-DECISIONAL

USAR Engineer - with TRO

4 BDEs
21 Battalion HQs
25 Earthmoving (Horizontal)
36 Construction (Vertical)
5 ESC (ABN/ASLT)
17 MAC

Over 20,000 Engineers

416th ENCOM

412th ENCOM

420th ENCOM

926th ENCOM

DRAFT Pre-Decisional

Over 20,000 Engineers

412th ENCOM

DRAFT Pre-Decisional



The Silver

Capability

CONOPS

Path
Resource

DOTMLPF Integration

Execute

THREAT
GAP
ANALYSIS

Defeat the System

- 11 Prevent: Alter Local Support Patterns
- 6 Detect: HUMINT/SIGINT/MASINT
- 3 Neutralize: Search, Patrols
- 4 Detect: Surveillance
- 5 Neutralize: Sniper

Training:
• Individual
• Leader
• Collective
• Battle Staff

• 1ST ARMY FORSCOM
• MANSCE N
• ICDT
• CAC-T
• CEHC
• TAT

Feedback

TOA:
CJRSOI
Situational Update:
CENTCOM
ATAT

Deployment:
In Theater Materiel & Training

Train the Force

10 Predict

Defeat the Device

- 8 Detect: Stand-Off
- 4 Detect: Optics / EM
- 5 Neutralize: Kinetics / Robotics
- 7 Exploit: WIT, Evidence C&P
- 9 Protect: Soldier, Vehicle, Facility
(SaaS, Movement, TCP / FOB)

1 Battle Command

Route Clearance OP

7 Exploit

Resources:
Internal
AR2B
REF
GWOT
JIEDDTF
IPT

Unit MRX:
CTC O/Cs
TAT/ATAT

Legend: ICDT DOTMLPF Integration

Feedback

MTOE (-) + Training Equipment

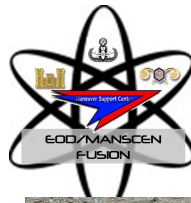
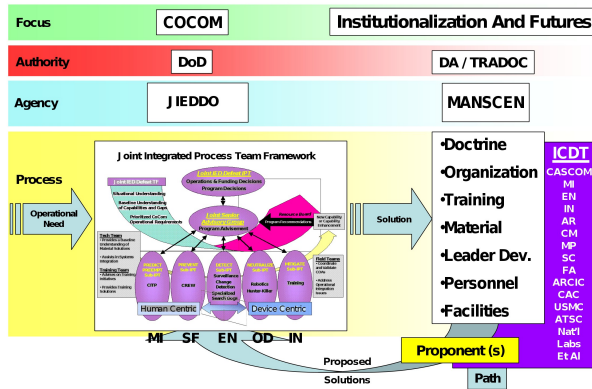
Reset/Train

Ready

Available

Chair IED-D ICDT

IED DOTMLPF Integration Strategy



EOCA Courses



Conduct functional training on IED-D equipment and TTPs



•Military Search



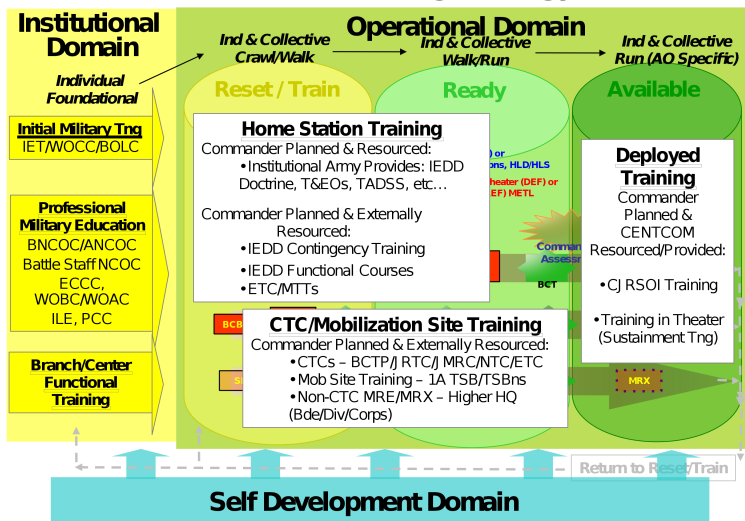
•IEDD T3



Support to OEF/OIF

RATIO FUNDO RATIO

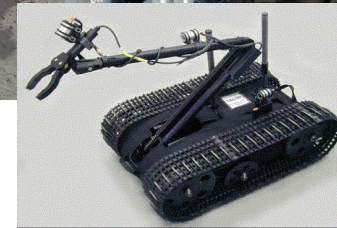
Force-Wide IED-Defeat Training Strategy Framework



EN Detection Dogs

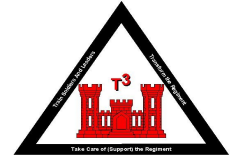


•Route Clearance





Engineer Materiel Update



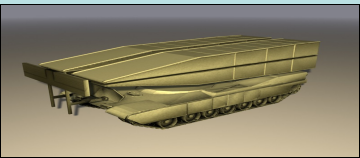
ROUTE CLEARANCE

- Fielded 30 Teams, by FY07 total of 67 Teams
- Buffalo - IED detection & neutralization - 38 OIF, 5 OEF
- IVMMMD - Metallic detection - 22 OIF, 3 OEF
- RG31 - Visual detection & C2 - 124 OIF, 20 OEF



GAP CROSSING/BREACHING

- 144 Joint Assault Bridges - Start FY08
- \$349M to equip 23 MRBCs with Dry Support Bridge and Ribbon Bridge, CBTs, BEBs
- 180 (+) Assault Breacher Vehicles - Start



CONSTRUCTION

- Ongoing SLEP, Reset, & New Buys = \$2.51B
- HMEE Type I contract awarded - 616 = \$233M
- BHL contract awarded - 523 = \$57.5M
- \$364M funding to uparmor construction equipment - DEUCE, IHMEE, 5 & 2.5 Loader, HYEX, Dozer, Scraper, Grader, Vibe Roller, HS Compactor



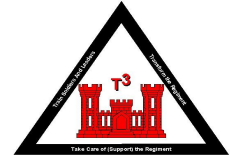
Engineer Canine Detachments

- 5 Dets FMC by 2nd QTR FY07
- 33 Teams Now, 54 Teams Target





Route Clearance Enhanced Capabilities



GYROSTABILIZED

GYROCAM: gyro-stabilized day/night, thermal and zoom camera for enhanced "on the move" detection



RPG PROTECTION

LRD: light weight aluminum cage to prevent an RPG warhead from functioning properly



REMOTE WEAPON STATION

CROWS: Remotely Operated Weapon Station to identify and engage targets with better range and accuracy



MEDIUM ROBOT

TALON II: Medium Robot with manipulator arm, low light and zoom cameras for remote IED detection



UNMANNED AERIAL VEHICLE

RAVEN: Small Hand Launched UAV systems for remote surveillance and reconnaissance



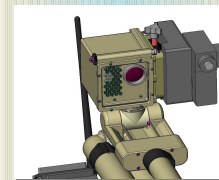
DIGITAL RF RECEIVER

SPIRIT HAWK: Receiver to detect unique RF emissions associated with targets of interest



STEREOVISION

A stereoscopic camera mounted on the interrogation arm that generates a three dimensional video image



FIDO: Sensor to detect explosive materials from a **HIGH POWER MICROWAVE**



DS II: High Powered Microwave **METAL DETECTION ARM** Hazards from a stand off distance



FERROT: Metal detection panel and video camera attached to an extendable arm from the IVMMD

FIELD DEVELOPMENT

TESTED TESTING

Essayons!

- **Our Army is Transforming and Re-Basing while fighting the GWOT**
- **Engineer Leaders are dealing with enormous complexity**
- **The Regiment's contributions to the Army continue to provide tremendous value to commander**



john.e.sterling@us.army.mil

6192

(573) 563-